

## About Our CONTRIBUTORS

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P. PHILIP GROSS, D.D.S. (The Thomas W. Evans Museum and Dental Institute, University of Pennsylvania, 1922) spent a year (1927-1928) studying advanced exodontia under Doctor George B. Winter at Washington University, St. Louis, and in 1935 attended Doctor Henahan's Exodontia School. For the last three years Doctor Gross has been conducting postgraduate classes in exodontia and oral surgery. He is a consultant at the American Oncologic Hospital, Philadelphia. The present article is his initial publication in these pages.

EDMUND L. GRIFFITH, D.D.S. (Northwestern University Dental School, 1902) is another general practitioner who contributes to this magazine for the first time.

GEORGE A. MORGAN, L.D.S., D.D.S. concludes in this issue the publication of the group of articles read before the Buffalo Dental Academy on March 22, 1938. The two previous articles in this series appeared in *THE DENTAL DIGEST* in August and September, at which time additional biographic information was given.

JEROME M. SCHWEITZER, D.D.S. is a familiar name to our readers and one associated with fine photographs which he takes himself. His last article, *RAISING THE BITE WITH IMMEDIATE DENTURES*, appeared in March of this year and was written in collaboration with his wife, Dorothy H. Schweitzer, a ceramist.

# THE DENTAL DIGEST

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## Silicate Restoration of Incisal Angles: Pin-Lock Inlay and Modification

BEN DENT, D.D.S., Memphis, Tennessee

BECAUSE OF THE friability of silicates and the lack of strength at the edges of silicate restorations, silicate has been shunned by the profession as a restorative material for the incisal angle. It is used extensively in interproximal and gingival cavities, however, because in these areas direct biting stress is not applied to the material. The patient's demand for esthetics has influenced the dentist to attempt restoration of either one or both incisal angles, with unsatisfactory results. This has led to the tedious, intricate, and time-wasting

preparation of the open-faced gold inlay, the baked porcelain inlay, or porcelain jacket crown when the patient can afford this type of restoration. Conservative operators decry waste of tooth structure, especially when baked porcelain is used.

Romberg's<sup>1</sup> pin-lock inlay seems to be the choice restoration for one incisal angle. It affords a metal edge to receive the biting force, thus protecting the silicate. The technique is simple. Ample stability and minimum

Fig. 1—A. Prepare the cavity. All margins must be square. B. Bevel the incisal angle carrying it across the marginal ridge.

Fig. 2—A. Prepare a shallow lock step over the marginal ridge. Sink pin-hole in floor of lock step. B. Incisal groove is cut from lock step to the proximal cavity.

Fig. 3—A. Platinized gold wire pin is placed in pin-hole and pattern waxed by direct method. Cement in position in cavity preparation. B. Inlay with lock pin. Hole is bored 1 mm. from free end.

Fig. 4—A. Completed inlay showing wire through free end seated in gingival pin-hole. B. Lingual view of completed restoration. No gold shows on labial.

<sup>1</sup>Romberg, F. A.: The Pin-Lock Inlay, D. Cosmos, 78:1236 (December) 1936.

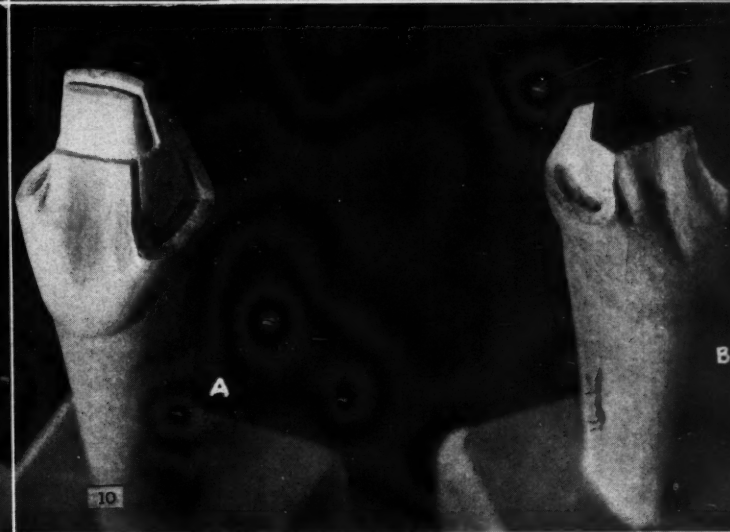
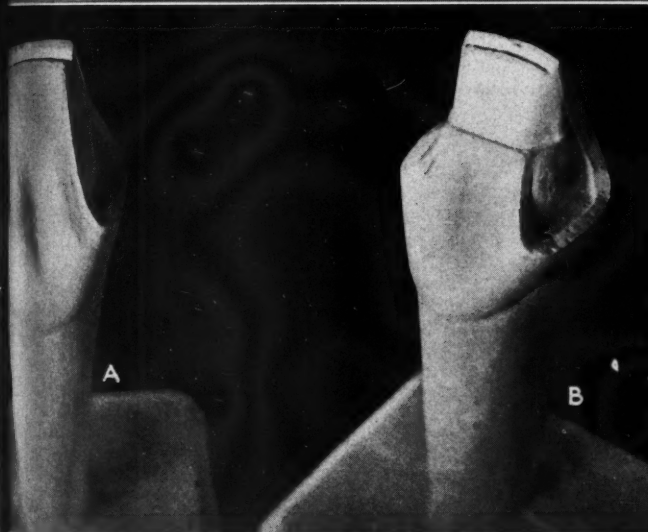
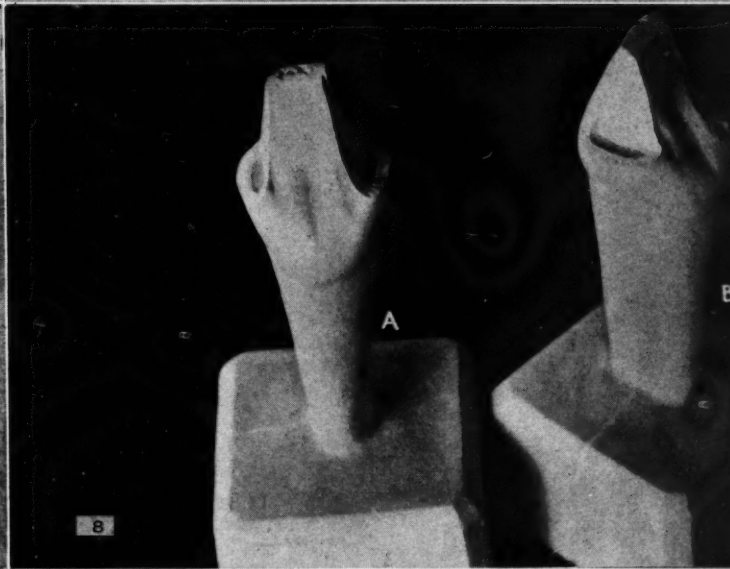
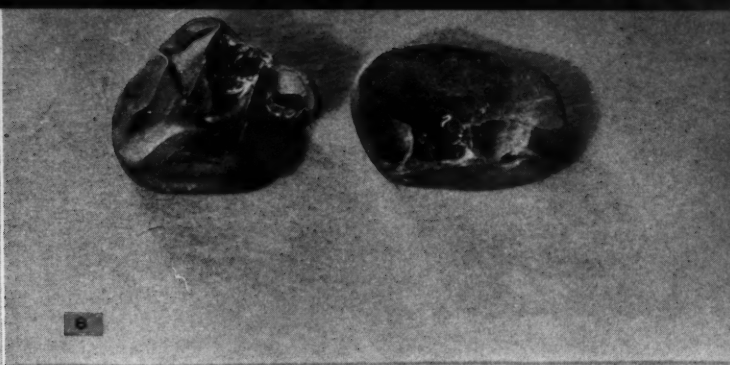
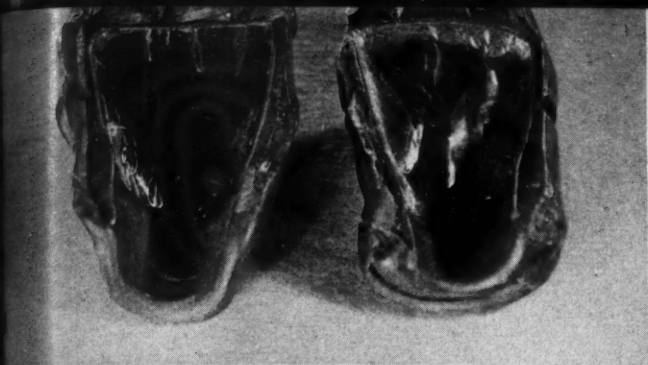


Fig. 5—Lingual and labial compound matrix lined with cellophane.  
Figs. 6 and 7—Compound matrixes of practical cases.

Fig. 8—A, Restoration of both incisal angles. Cavities prepared and margins squared. B, Incisal bevel.

Fig. 9—A, Incisal groove. B, Three-quarter preparation with shoulder. Preparation and shoulder tapers outward on mesial and distal pulpal walls.

Fig. 10—A, Groove in line with long axis of tooth connects incisal groove with shoulder. B, Inlay showing mesial and distal free ends.





Fig. 11—A, Completed inlay, B. Completed restoration. No metal shows on labial.



Fig. 12—A, Practical case for restoration of both incisal angles. Two centrals with crumbled silicate. B, Upper right central restored. Upper left central cavities cleared of silicate and prepared.

loss of tooth structure are secured with this pin-lock inlay. Patients of moderate income can afford it.

Many cases in which both the mesio-incisal and disto-incisal angles are involved present to the average general practitioner. A great number of these cannot be restored with the porcelain jacket crown; reconstruction can be accomplished, however, by using a modification of the pin-lock inlay and silicate. The technique has not yet been sufficiently simplified. It is, nevertheless, almost as simple as the technique for a pin-lock inlay.

#### Technique for Restoration of One Incisal Angle

1. Prepare the cavity (Fig. 1, A). Do not cut the labial or lingual walls. All margins must be square.

2. Bevel the incisal edge at the expense of the lingual surface (Fig. 1, B). Do not cut the labial wall except for incisal correction. Carry this bevel across the entire incisal edge to include the marginal ridge.

3. Prepare a shallow lock step (Fig. 2, A) in the bevel over the marginal ridge. With a number  $\frac{1}{2}$  round bur sink a pin-hole in the lock step to the depth of 2 mm., parallel to the long axis of the tooth.

4. Fill the cavity portion with an extremely heavy mix of oxyphosphate of zinc cement.

5. Carve to the original contact and contour (Fig. 3, A). Carry the incisal bevel entirely across the cement.

6. A groove (Fig. 2, B) is now cut in this bevel into the dentine between

the labial and lingual wall to a depth of approximately 1 mm. The groove extends from the lock step across the cement to the approximating tooth.

7. Cut an appropriate length of 22-gauge platinized gold wire, and place it in the pin-hole, so that 2 mm. or 3 mm. will extend beyond the incisal edge (Fig. 3, A). With the wire in place, a wax pattern can be made direct (Fig. 3, A), or, if the operator prefers, an impression can be taken from which a model is poured in inlay investment and the indirect wax

pattern made. The wax pattern must make contact with the approximating tooth.

8. Close the pin-hole with temporary stopping until the inlay is ready to be tried. If a wisp of cotton is placed in the floor of the pin-hole before the temporary stopping is inserted, the removal of the stopping will be facilitated.

9. After the pin-lock inlay is cast in hard gold (Fig. 3, B) a hole is bored about 1 mm. from the free end. (The word "free" designates that portion



Fig. 13—Both centrals restored.



of the inlay that extends over the cavity. The word "end" designates the free part of the inlay which contacts the approximating tooth.) A piece of 18-karat, 20-gauge wire of flexible gold is passed through this hole and soldered in position (Fig. 4, A). This makes a strong union. The length of this is determined by the distance from the incisal edge of the temporary cement filling to the gingival floor. About 2 mm. more are allowed for waste in soldering and 1 mm. in addition to be seated into a pin-hole in the gingival floor similar and parallel to that made in the lock step.

10. The cement is removed and the inlay fitted to place.

11. The flexible wire should be bent to converge slightly toward the lock pin. This pin should be parallel to the long axis of the tooth and, if possible, perpendicular to the biting stress.

12. After the direction of the pin is determined, a hole is sunk about 1 mm. into the gingival floor to receive its loose end.

13. If the operator prefers, he may use the direct method for attaching the pin:

a) The cement is removed from the cavity.

b) The pin-hole is sunk in the gingival floor and the inlay placed in position on the tooth.

c) The platinized gold wire is passed through the hole in the free end of the inlay and seated in the gingival pin-hole.

d) The wire is attached to the inlay with sticky wax.

e) Remove, invest, and solder.

14. With the completed frame inlay in place, fill the cavity with either temporary stopping or hard inlay wax, and carve to the shape desired.

15. Now make a matrix of impression compound (Figs. 5, 6, and 7), covering the lingual and incisal surface to include at least one tooth on each side of the one being restored.

16. Key the lingual matrix, and with this in place, make a labial matrix in similar manner (Figs. 5, 6, and 7) to fit into the key of that on the lingual.

17. If the compound pushes into the

temporary stopping or inlay wax, that area may be scraped.

18. Line with cellophane that portion of the lingual and labial matrix which covers the cavity area. Use any of the cavity varnishes to attach the cellophane to the matrixes.

19. The temporary stopping or inlay wax is removed.

20. Isolate the cavity, dry it thoroughly, but do not dehydrate.

21. Wipe the cavity with 5 per cent phenol, allowing this to remain for five minutes; then dry the cavity thoroughly.

22. Cement the inlay to place and after it has set, carefully remove all excess.

23. Apply the lingual matrix; mix the silicate; pack it to fill the cavity, and apply the labial matrix with pressure. Hold in position at least three minutes, preferably four or five minutes.

24. Remove the matrixes; coat the silicate either with white vaseline or melted paraffin.

25. If the lower teeth strike the lingual surface, the lingual surface may be dressed down carefully after fifteen minutes.

26. Do not attempt to finish the restoration for at least one hour. Final dressing and polishing should be done after twenty-four hours (Fig. 4, B).

### Technique for Restoration of Both Incisal Angles

1. Prepare the cavities (Fig. 8, A).

2. Bevel the incisal edge at the expense of the lingual surface (Fig. 8, B).

3. Fill the mesial and distal cavities with a stiff mix of oxyphosphate of zinc cement.

4. Carve to the original contour and contacts.

5. Carry the incisal bevel across the cement to the approximating tooth mesially and distally.

6. Cut a groove from mesial to distal across the incisal (Fig. 9, A). This groove should be midway between the labial and lingual walls and should be approximately 1 mm. deep into the dentine.

7. Make the wax pattern for the in-

cisal edge at this time and set it aside for use in step 13 when it will be placed in position.

8. Remove the cement from the cavities.

9. On the lingual surface, approximately at a point midway from the incisal edge to the gingival border of the cavities, make the preparation as for a three-quarter crown with a shoulder, allowing this preparation to taper outward on the mesial and distal pulpal walls (Fig. 9, B).

10. On the mesial and distal pulpal walls cut a groove connecting with the incisal groove and running in a direction parallel to the long axis of the tooth (Fig. 10, A). This groove ends at the shoulder.

11. Take an impression of the prepared tooth, preferably with one of the hydrocolloids.

12. Pour a model and wax-up a pattern to cover the mesial, lingual, and distal preparation.

13. Place into position the incisal wax pattern prepared in step 7.

14. Tack the two patterns together, invest, and cast in any good hard gold (Fig. 10, B).

15. It is best, when both angles are being restored, to carry the inlay back to the mouth for a try-in.

16. If the inlay proves correct, with a number 1/2 round bur, drill a hole about 1 mm. from the free end on both the mesial and distal (Fig. 11, A).

17. With a number 1/2 round bur, sink a hole about 1 mm. into the gingival floor in line with the long axis of the tooth (Fig. 11, A).

18. Run 22-gauge or 24-gauge platinized gold wire pins of appropriate length through the holes in the inlay and seat them in the pin-holes prepared in the gingival floor of the cavities.

19. Attach the pins to the inlay with sticky wax.

20. Remove, invest, and solder (Fig. 11, A).

21. Prepare a lingual and a labial matrix as in the case of a single incisal angle restoration (Figs. 5, 6, and 7), and complete in the same manner (Figs. 11, B, 12, and 13).

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# Alveolectomy and Immediate Denture Insertion

P. PHILIP GROSS, D.D.S., Philadelphia

WE ARE OFTEN CONFRONTED with cases of maxillary protrusion in which the extraction of the teeth alone does not remedy the esthetic effect. The protrusion of the labial portion of the denture is such that, if the artificial teeth are butted into the sockets, the protruding labial portion keeps the lip extended and defeats the purpose. The adding of a labial gum to the denture makes the protrusion worse. From a prosthetic standpoint, to arrange the teeth better and for esthetic reasons, it is essential to reduce both labial and vertical extensions.

## Report of Case

A girl, aged 16, presented with a maxillary protrusion of the six anterior teeth. The patient complained of the usual self-consciousness in such cases on meeting people for the first time.

**History**—The maxillary protrusion was evident in early life and became progressively worse as the girl grew older. This development is shown in Figs. 1 through 16. The parents reported that the patient sucked her thumb until she was 10 years of age.

**Examination**—The anterior teeth were rampant with decay at the gingival and approximal surfaces. The bicusps and molars were in normal occlusion and the lower anteriors in correct alignment. The patient was unable to bring her lips together in repose. The upper lip rested upon the protruded upper teeth (Figs. 17 and 18). Roentgenographic examinations revealed periapical involvement.

**Treatment**—After consultation with an orthodontist, it was decided to ex-



Figs. 1 through 16—Heads of photographs previously published in *Life* magazine as "... Mr. C's Little Girl Grows Up." (Used here with permission of *Life* and the patient's mother.) Note developing malocclusion. The pictures were taken at 1 year of age and each succeeding year up to 16.

Fig. 17—Lateral view, lip in repose. Impossible to bring lips together. Lip resting at all times on upper teeth.

Fig. 18—Front view.

Fig. 19—Side view of model showing maxillary protrusion of teeth and labial plate of bone.

Fig. 20—Occlusal view.

Fig. 21—Under local anesthesia, upper six anterior teeth removed.

Fig. 22—Retraction of palatal mucoperiosteum. This flap is to be used as a covering for the crest of the ridge over to the labial surface. The palatal tissue is tougher than

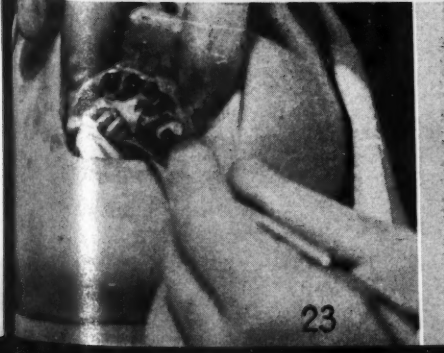
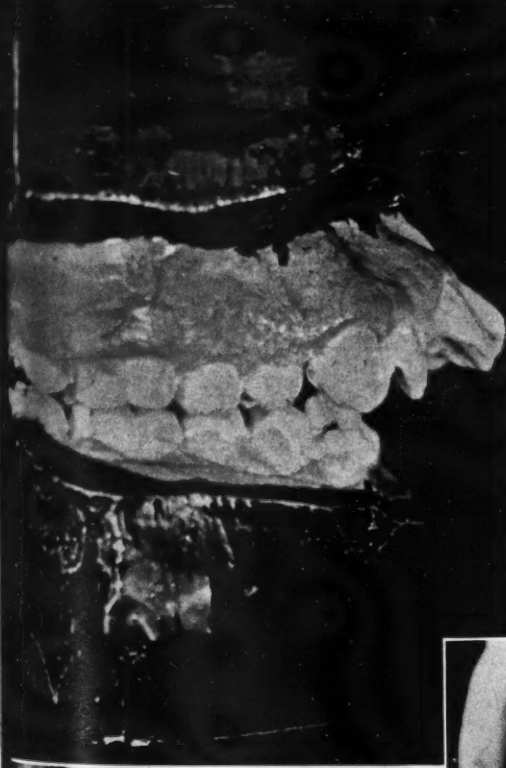
the labial tissue and, therefore, gives the denture a better base upon which to rest.

Fig. 23—Pressure applied at incisive foramen to control hemorrhage at time of operation.

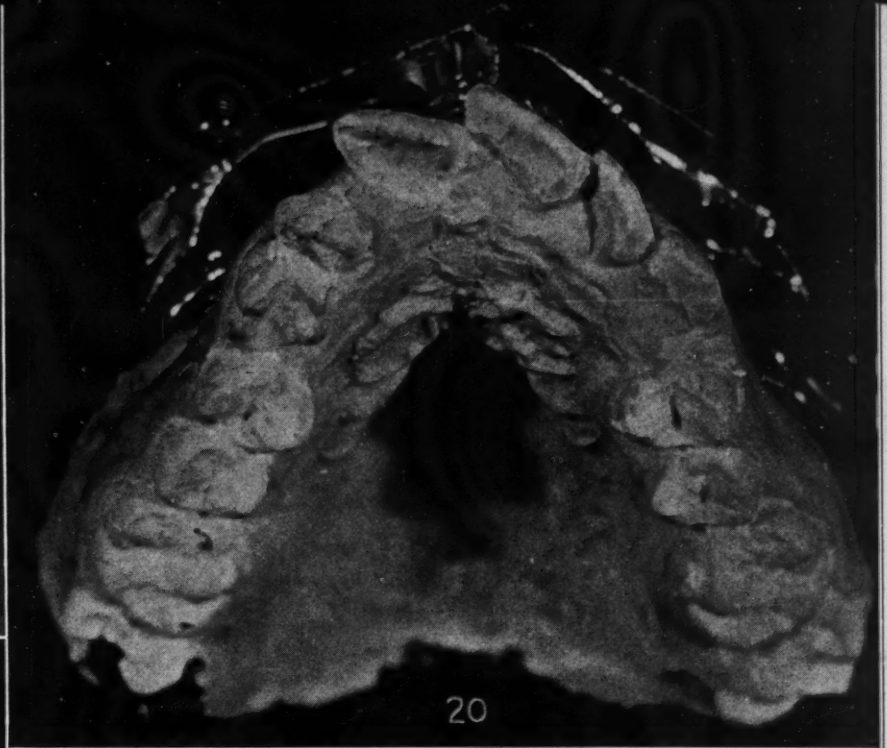
Fig. 24—Retraction of labial mucoperiosteum and reduction of prominence.

Fig. 25—Flat reduction of ridge vertically, to prevent a pointed ridge after healing takes place.

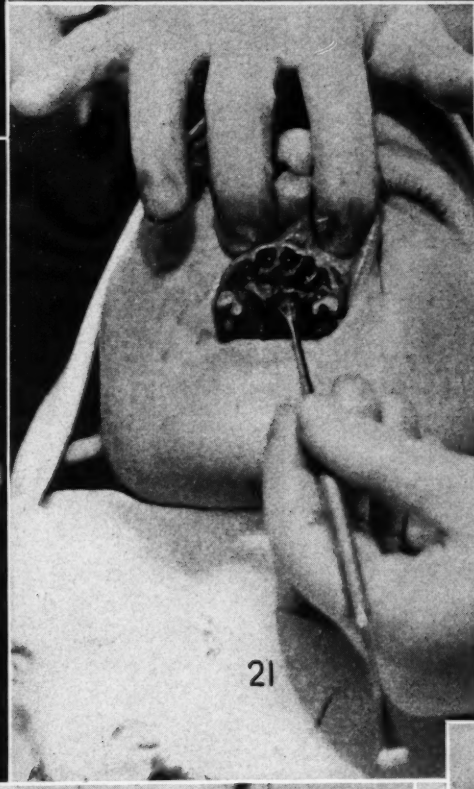




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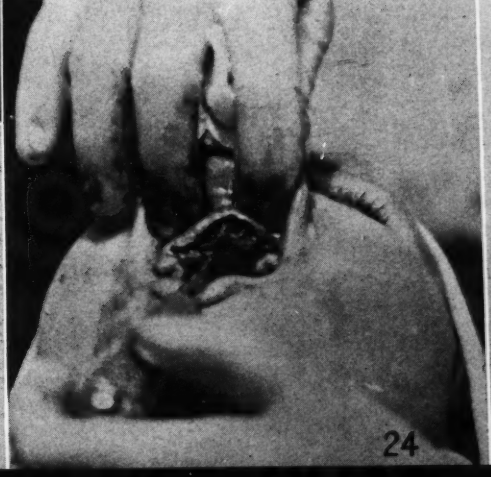
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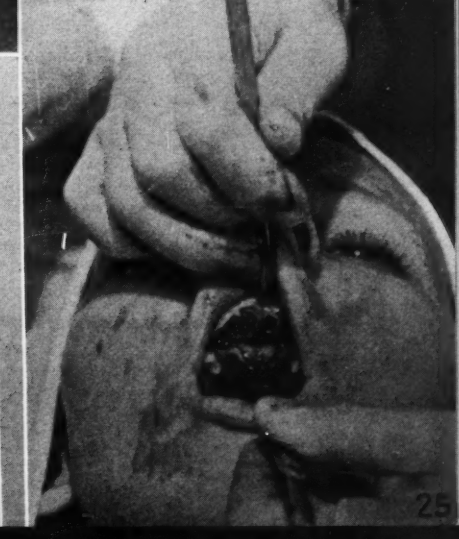
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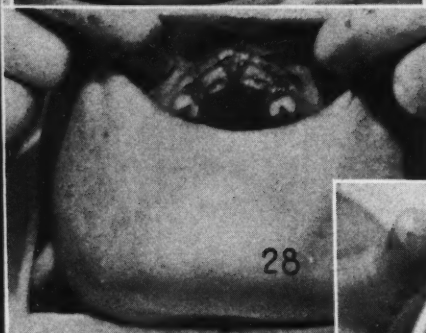


Fig. 26—Operative field cleaned of loose bone spicules, and flaps sutured. Palatal flap is brought over the ridge and sutured to labial side. Celluloid baseplate is tried in before suturing to assure proper seating of denture.

Fig. 27—Completed operative field. Note how palatal flap covers ridge.

Fig. 28—Completed operative field, with teeth closed. Note bicuspid in occlusion and space between upper and lower ridge.

Fig. 29—Front view, following complete operative procedure. Lip in repose and in normal position.

Fig. 30—Side view, with lips together for the first time.

Fig. 31—Surgical dressing applied to denture.

Fig. 32—Denture partly inserted.

Fig. 33—Denture and dressing in position.

Fig. 34—Removing excess dressing.

Fig. 35—Denture finally seated.

Fig. 36—Occlusal view of partial horseshoe denture on model.

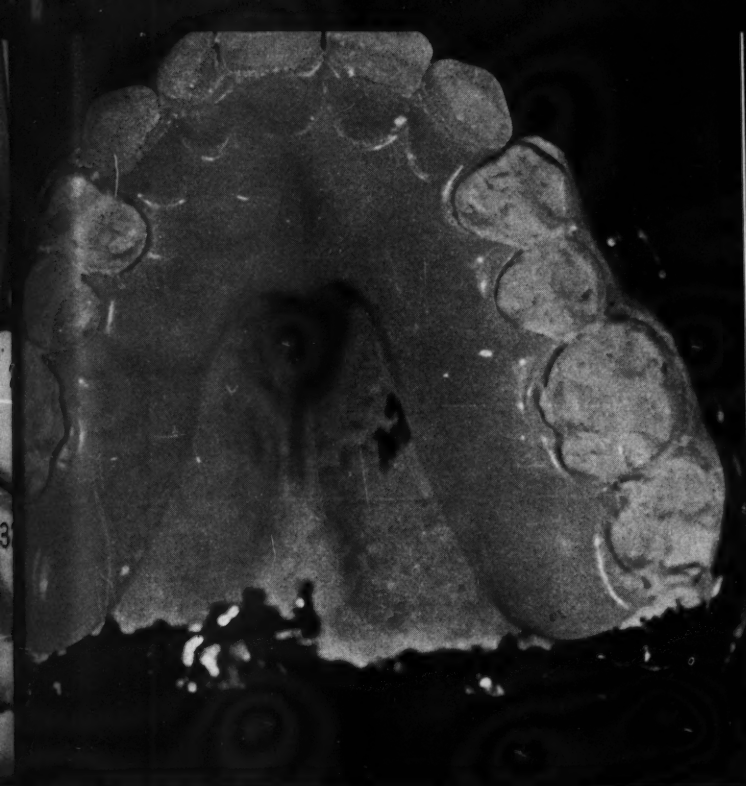
Fig. 37—Front view. Denture on model. Note amount of tissue that was removed.

Fig. 38—One week later. Side view, with lips at rest.

Fig. 39—Front view, with lips at rest.

Fig. 40—Side view showing high lip line.

Fig. 41—Front view showing high lip line.



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tract the anterior teeth and perform an alveolectomy. A partial denture was to be inserted at the time of the operation. Orthodontic intervention was precluded by the condition of the teeth.

*Pre-Operative Procedure*—1. An impression of the mouth was taken and the teeth were cut off the model.

2. The necessary amount of excess tissue to be cut in the mouth was trimmed from the model and the

teeth were set in line (Figs. 19, 20 and 37).

3. The lateral on the left side was omitted to permit proper selection of teeth (Fig. 37).

4. A celluloid baseplate was made over the model, to be used at the time of the operation. The purpose of the celluloid baseplate is to reveal the high spots which keep the denture from being seated. The celluloid baseplate being translucent, high spots

are seen as blanched areas. After the celluloid baseplate is properly seated, the insertion of the denture is a simple matter.

*Operation and Result*—The operative procedure<sup>1</sup> and postoperative results are shown in Figs. 21 through 41.

6740 Torresdale Avenue.

<sup>1</sup>Jaffe, S. S.: Immediate Dentures, DENTAL DIGEST, 38:82 (March) 1932.

## AMERICAN DENTAL ASSOCIATION

Eightieth Annual Session

HOTEL STATLER, St. Louis, Missouri

October 24, 25, 26, 27, 28, 1938

### MEETINGS OF ASSOCIATED GROUPS

NAME	PLACE	DATE
American Academy of Restorative Dentistry	Jefferson Hotel	October 22-23
American Society of Oral Surgeons and Exodontists	Jefferson Hotel	October 20-21-22
National Association of Dental Examiners	Hotel Statler	October 22-23
American College of Dentists	Hotel Statler	October 23
American Association of Dental Editors	Hotel Statler	October 22
American Society for the Promotion of Dentistry for Children	Jefferson Hotel	October 24
American Full Denture Society	Jefferson Hotel	October 22-23
American Association of Women Dentists	Hotel Statler	October 24
Association of Military Dental Surgeons	Hotel Statler	October 25
National Society of Denture Prosthetists	Jefferson Hotel	October 17-22
Annual A.D.A. Mouth Hygiene Luncheon	Hotel Statler	October 26
Mouth Hygiene Workers' Breakfast	Hotel Statler	October 25
American Association of Public Health Dentists	Hotel Statler	October 23-24
Advisory Board for Dental Specialties	Hotel Statler	October 24
American Dental Assistants' Associations	DeSoto Hotel	October 24-28
American Dental Hygienists' Association	Claridge Hotel	October 24-28
American Academy of Periodontology	Coronado Hotel	October 20-22
Pan-American Odontological Association	Hotel Statler	October 24
Research Commission of the A.D.A.	Hotel Statler	October 23
International College of Dentists	Jefferson Hotel	October 23
American Dental Golf Association	Hotel Statler	October 23
American Dental Trapshooters League	St. Louis Gun Club	October 24





Fig. 1—Head back; mouth open, showing no muscle strain. This is the time to insert wax for the bite.



Fig. 2—Head back; mouth open with slight protrusion. Finger points to muscle strain.

## Technique for Recording the Bite

EDMUND L. GRIFFITH, D.D.S., Freeport, Illinois

WHEN RECORDING THE bite in full denture cases, it is common clinical experience to have the patient produce a protrusive relationship. If the bite is registered according to the protrusive relationship, the dentures will be constructed without proper occlusion. Many devices and many methods have been employed to assure accurate bite recording. The simple technique herewith given requires no special equipment or involved procedure.

### Technique

1. With the patient in the chair, adjust the back-rest so that the patient sits in an upright position. Do not tell the patient that you are about to obtain the bite. With the head in the upright position, it is easy to protrude the mandible forward from its position in the glenoid fossa. This protrusion produces no strain on the surrounding structures and is frequently difficult to ascertain. When the head is thrown backward, however, any attempt to give a protrusive

Fig. 3—Head in upright position; mandible in normal occlusion. Condylar head in correct position in glenoid fossa.



Fig. 4—Front view of position shown in Fig. 3. Normal occlusion.



(Continued on page 431)

# The Impacted Mandibular Third Molar

GEORGE A. MORGAN, L.D.S., D.D.S., Toronto, Ontario, Canada

PREVIOUS TO THE more general routine use of roentgenograms as an aid in diagnosis the study of the impacted mandibular third molar revolved around the tooth removed, rather than the socket. In the removal of the impacted mandibular third molar, the same general fundamental principles as apply in surgery elsewhere in the body should be strictly observed.

The first essential should be a definite, clear roentgenogram of the tooth to be removed, along with the adjacent tooth and bone structure. With this information before him, the dentist should, along with a clinical examination of the patient's mouth, determine several important factors: (1) justification for removal; (2) condition of second molar; (3) the amount and character of bone to be removed; (4) prognosis; (5) type of anesthesia and premedication; (6) kind of incision for flap; (7) operative procedure, and (8) postoperative treatment.

## Justification for Removal

Justification for the removal of the impacted mandibular third molar may be found (1) in the elimination of pericoronal abscess; (2) as a preventive orthodontic measure; (3) because of pain due to pressure on the inferior dental nerve; (4) in the development of cystic tendencies; (5) in causation of decay in the adjacent second molar.

## Condition of Second Molar

The condition of the second molar is an important pre-operative consideration. The root and crown formation, the amount of restorative material or the amount of caries are only a few of the many factors to be observed. The patient should then be informed as to the relationship existing between the impacted third molar and the second molar and also as to the prognosis.

## Removal of Bone

Some opinion as to quality and

quantity of bone to be removed should be pre-operatively determined. Age, sex, nationality of patient, curvature of root or crown structure, extent of coronal and pericoronal sacs, and the degree to which the jaws have been in function—all will have a bearing on this important pre-operative problem.

## Prognosis

It is advisable to discuss the prognosis with the patient in order that he may be prepared for complications, but he should not be unnecessarily alarmed, and precautions should be dictated by common sense.

## Type of Anesthesia and Premedication

A great deal of the discomfort experienced during the extraction of the impacted mandibular third molar is due to fear. Dentists, especially in complicated extractions, are beginning to recognize the value of pre-operative medication to reduce the apprehension which the patient may have regarding surgical procedures. Adequate premedication not only insures cooperation from the patient during the operation but also adds to his comfort for several hours after surgical intervention. If a general anesthetic is the one of choice,  $1\frac{1}{2}$  grains of nembutal (pentobarbital sodium) will reduce the tendency to nausea and vomiting. If a local anesthetic is the one of choice and, if the extractions are to be severe rather than extensive, from  $1\frac{1}{2}$  to 3 grains of pentobarbital sodium will alleviate fear as well as increase the tolerance for procaine. If hospitalization of the patient is desirable, from  $1\frac{1}{2}$  to 3 grains of pentobarbital sodium can be used in conjunction with one-sixth grain of morphine which will tend more readily to produce "basal narcosis."

## Caution

At this point it might be well to emphasize the danger to ambulatory patients of a 3 grain dosage of pento-

barbital sodium. If such a heavy dose is to be prescribed, the patient should be hospitalized, or, at least, accompanied to and from the office by another person, then kept in bed the remainder of the day.

A local or general anesthetic may be chosen for the extraction of teeth. Some dentists prefer a certain anesthetic, either because of the technique employed for a particular type of operation or because of long acquaintance with the anesthetic. Equally good results are obtained with different anesthetics in the hands of different operators. Usually the type of anesthetic used may be left to personal preference; however, the physician may furnish some information which would make one anesthetic seem more desirable than another. A general anesthetic would be contra-indicated, for example, in certain disorders of the thorax.

## Incision for Flap

The situation and type of incision are determined by the roentgenographic and clinical observations. There are various types of incisions that are satisfactory so far as access and visibility are concerned, but to prevent sloughing, the flap must have an adequate blood supply. The incision should include the periosteum, as it is advantageous to retract the periosteum with the other soft tissues. The retractor should be an instrument so shaped that it will accomplish the purpose for which it was intended with a minimum of trauma to the flap. Postoperative results are much better when the periosteum is less traumatized. This particular point was made by Crile who emphasizes that injury to the periosteum results in shock.

## Operation

There are two methods of creating space to facilitate the removal of an impacted mandibular third molar: The more popular method is to remove the process so that the tooth can be crowded into the space created



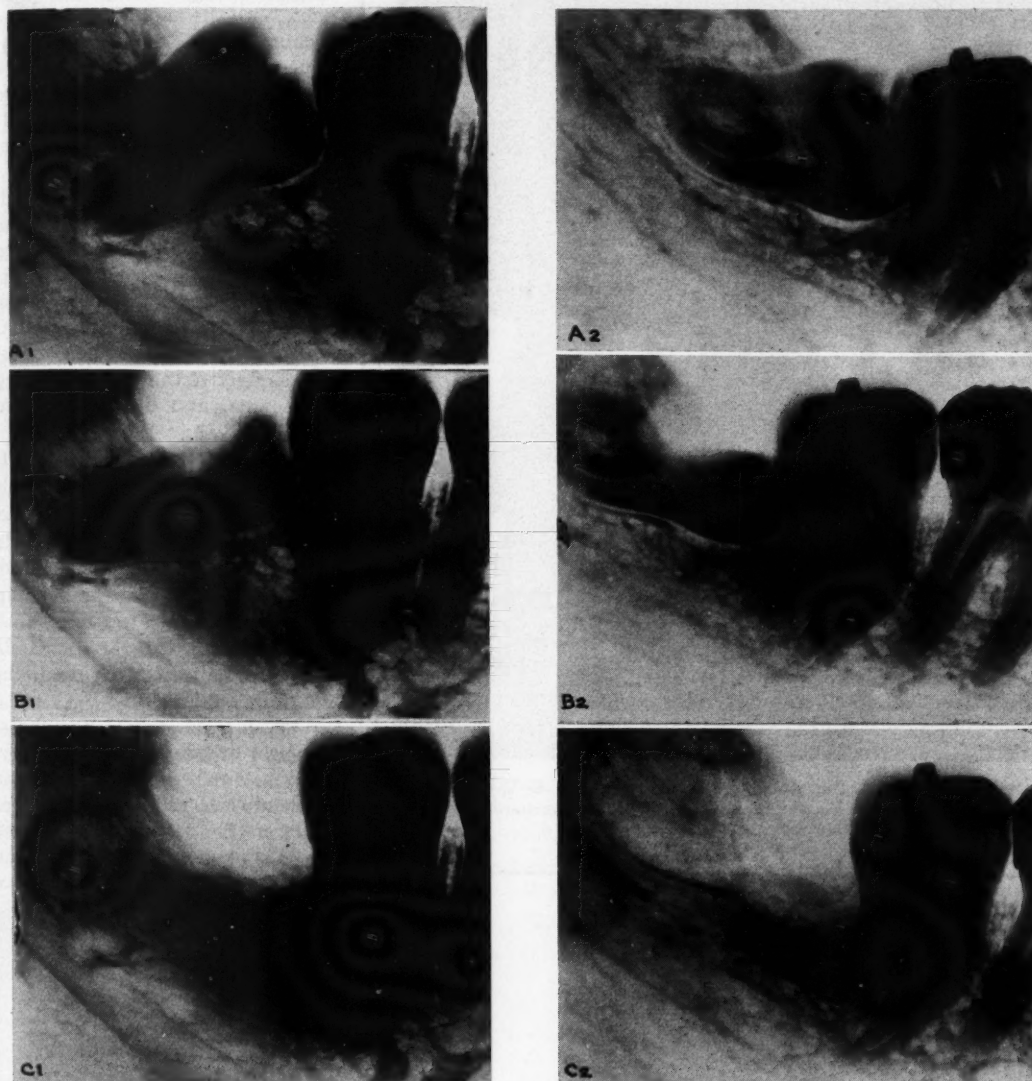


Fig. 1—Problem: (a) Extraction of impacted right mandibular third molar, necessitated as a preventive orthodontia measure. Note bifurcated roots. (b) Intermediate step (excision of part of crown) in surgical procedure; (c) postoperative roentgenogram showing complete removal of tooth with minimum amount of bone destruction.

Fig. 2—Problem: (a) Extraction of impacted right mandibular third molar, necessitated by neuralgic type of pain. Note fused roots. (b) Roentgenogram demonstrating intermediate step (excision of part of crown) in surgical procedure; (c) postoperative roentgenogram showing complete removal of tooth with minimum amount of bone destruction.

and then lifted from the socket. The other is to create space by incising part of the tooth. By the latter method, a minimum amount of alveolar process is cut away and space is created by the impacted tooth itself. Generally, when the crown is lifted with an elevator, especially in the horizontal type of impaction, the roots are likely to traumatize the

nerve trunk; whereas, if the crown has been severed and the root or roots forced forward into the space created by the loss of the crown, the possibility of inferior dental nerve paresthesia is greatly reduced, unless the nerve is so held by the roots that any movement of the roots would produce a definite pull or traumatic injury to the contents of the canal.

*Use of Mallet and Chisel*—In order to use the mallet and chisel to cut or split the crown or any part of the tooth, it is necessary that the chisels have a long bevel and be sharpened to razor-keenness. The mallet should be of a certain weight and shape, and the blow should be struck in such a way that the two instruments will meet at right angles. There should be



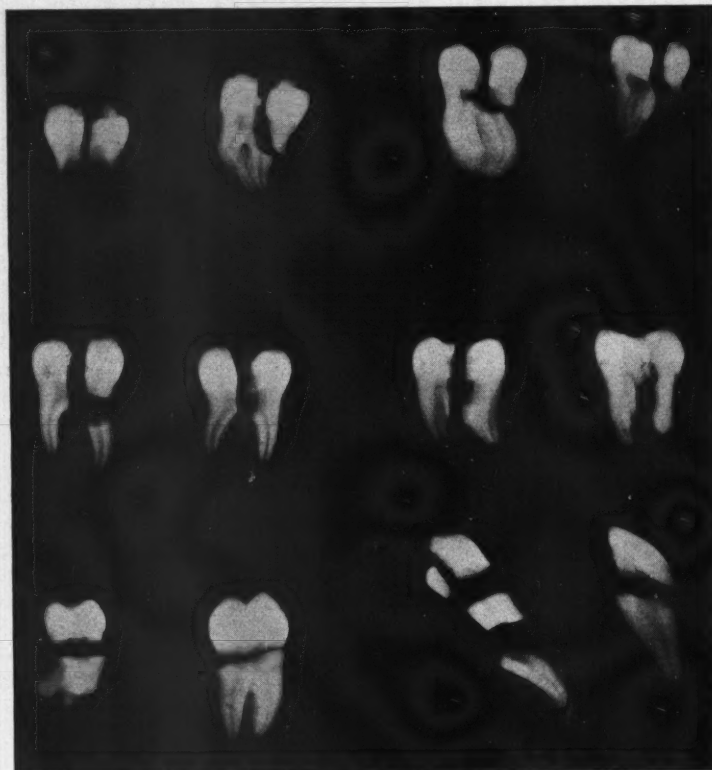


Fig. 3—Various angulations at which impacted teeth may be split, thereby creating space which facilitates the removal of the remaining tooth substance with minimum bone destruction.

sufficient mass of the mallet directly behind the point where the chisel is met. With the angulation of this particular mallet, all requirements are much easier than with the older conventional type. There should be no rubber tips on the chisels and the head of the mallet should not be made of soft material.

The assistant should not hold the mallet tightly in delivering the stroke, as in this manner it is not so effective as when loosely held. The stroke should be short, a "follow through," as in golf. I have found the mallet and chisel illustrated (Fig. 4) to be far more effective than any revolving instruments, and by their use much time is saved.

It should be emphasized that the correct blow from the type of mallet, to which reference has been made, is not so severe as some operators may think, and certainly far less annoying to older patients than when sufficient pressure is applied to a hand chisel to cut bone, especially if the mandible has been subjected to a great amount of functional use.

*Amount of Bone Removal*—The amount of bone to be cut away will vary in different cases, but sufficient bone must be removed to uncover the part of the tooth where the chisel is to be applied. In other words, one does

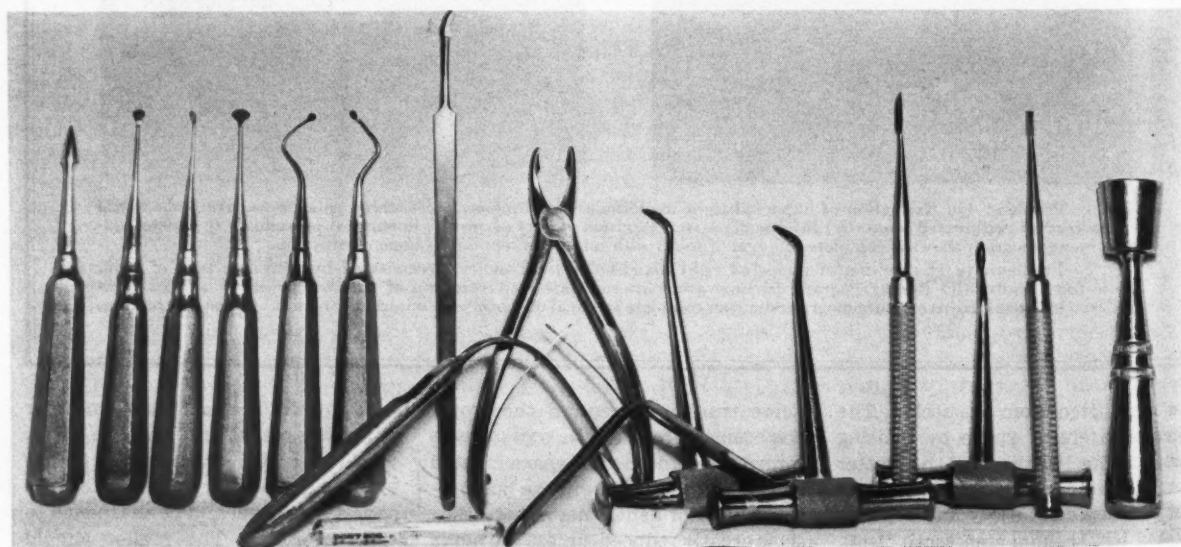


Fig. 4—Instruments used in the removal of the impacted mandibular third molar employing the Gardner-Austin-Stafne technique. Left to right: Spade periosteal elevator; number 12 curet; Molt curets, numbers 1, 3, 4, 5 and 6; Austin knife; rongeurs; elevators, numbers 150 and 151; Gardner driving chisel number 51; elevator number 135; Gardner bone chisel, number 52 (note long bevel); improved Gardner mallet; tongue retractor; 000 catgut suture material; Austin cheek retractor; half-round Gardner needle.

not attempt to cut bone and tooth at the same time. Seldom is it necessary to remove any of the lingual plate and no attempt is made to remove large pieces of bone in one cutting; better postoperative results have been obtained when the cuttings are small. This point must be realized for a successful postoperative result.

#### Postoperative Treatment

Postoperative treatment will depend largely on the degree to which asepsis has been carried out, and on the amount of trauma produced. Usually it is necessary to replace and suture the flap. The use of 000 catgut

suture material is recommended because of its resilience and absorbable qualities. To prevent inflammation and postoperative swelling, an ice-pack is applied immediately after the difficult extraction of teeth, the success of the measure depending on its immediate use. Lowering the temperature of the part prevents extravasation of the elements of the blood and lymph, a process which tends to occur more readily in an area of higher temperature.

#### Comment

Strict adherence to the foregoing procedure, along with the technique

of splitting tooth structure, as originated by Doctors Gardner, Austin, and Stafne of the Section of Dental Surgery, Mayo Clinic, has, in my opinion, done a great deal to alleviate painful postoperative sequelae, facilitating in many instances, the easy removal of otherwise difficult impacted mandibular third molars. Routine postoperative roentgenograms and records of a series of cases have shown the advisability of this method of removal.

2 Bloor Street, East.

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## TECHNIQUE FOR RECORDING THE BITE

(Continued from page 427)

relationship is overcome by the tendency of the muscles of the neck to retract the jaw to its natural position.

2. Heat the wax or compound to the correct temperature, roughly shape it to fit the arch, and keep it in a pan of warm water near the chair.

3. Remove the head-rest, so that the patient can toss the head backward. With the patient sitting upright and

the head thrown as far back as possible and with the mouth open, place the wax in the mouth over the ridges.

4. Instruct the patient to close the mouth slowly; measure the distance. When the distance is correct, instruct the patient to close no farther and not to move the mandible.

5. Bring the patient's head up straight; adjust the head-rest so that

the patient's head will rest; cool the wax and remove.

6. After the models have been mounted on the articulator from this first recording, blocks can be made in wax and the measurements confirmed or revised in the patient's mouth.

502 State Bank Building.

# Extensive Prosthetic Restorations: Report of a Case

JEROME M. SCHWEITZER, B.S., D.D.S., New York

A WOMAN, AGED 30, wore an upper and a lower gold clasp removable bridge. The anterior jacket crowns had been in for a number of years and the original color had apparently changed. The clasps had caused severe erosion and the bite had closed (Fig. 1).

**Examination**—In the mandible, the following teeth were present: lower right central, lateral, and cuspid; lower left central, lateral, cuspid, and second molar. The lower left cuspid was pulpless, but presented no infection. The lower left second molar was badly eroded from the effects of a clasp worn upon it over a period of years, and had large restorations.

In the maxilla, the following teeth were present: upper right central, cuspid, first bicuspid, and second molar; upper left central, lateral, and cuspid. The upper anterior teeth were covered with porcelain jacket crowns. The remaining upper teeth had large restorations and were badly eroded from clasps.

**Preliminary Procedure**—After having taken photographs, roentgenograms, and all necessary indexes, a set of elastic impressions was taken and poured in stone. The models were mounted on an articulator by means of the face-bow registrations. The sagittal inclinations were adjusted by means of a protrusive bite taken directly in the mouth, which gave the following registrations: right sagittal, 18 degrees; left sagittal, 15 degrees.

The right and left lateral registrations were computed by formula. The incisal registration was set at zero (Figs. 2 and 3).

**Reconstruction of Occlusion**—The operation for the reconstruction of the occlusion was begun as follows:

The lower left molar was prepared for a cast crown; the lower left cuspid, which was pulpless, was prepared for a cast coping, with which to carry a jacket crown, with a distal internal attachment. When these two teeth

were prepared and the castings were in position, an impression was taken in plaster of the entire lower jaw, a model was poured in stone, and the lower case constructed.

**Construction of Lower Case**—A Gillette clasp was prepared for the lower left molar and the lug seat of the clasp was paralleled to the internal attachment on the distal of the lower left cuspid gold coping. A clasp was prepared for the lower right cuspid and the lower gold removable bridge was attached in the manner described. The teeth conformed to the four-inch disc (Figs. 4 and 5).

**Construction of Upper Case**—When the lower removable bridge was in position, the upper case was begun. The upper right posterior molar was prepared for a cast crown in such a manner as to allow for an internal attachment on the mesial side, and room for a porcelain facing on the buccal. The upper right first bicuspid was prepared for a cast crown which was to have a porcelain veneer facing and an internal attachment on the distal. The upper left cuspid was prepared for a jacket crown which was to have a distal internal attachment.

**Checking Occlusion**—When the amalgam dies were ready, porcelain thimbles were baked in each amalgam die. With these porcelain thimbles on their respective teeth in the mouth (that is, the right first bicuspid and second molar, and the left cuspid) and with the lower removable bridge in position, the bite was ground directly in the mouth, to the desired height of the finished case (Fig. 6). It was noticed, however, when the lower model was articulated to the upper working model, with the dies and the porcelain crowns in position, that the bite was protruded. Evidently, the bulky porcelain temporary crowns on the upper right first bicuspid, upper right second molar, and the upper left cuspid had guided the bite to a protrusive position. The

three gold castings on the upper working model, therefore, were made with this in mind. It was certain that there should be a slight overjet at the opening to which this bite was being raised.

When the copings were made, a bite block was also made, and with the cast gold coping in position in the mouth, the occlusion was again checked (Figs. 7 and 8). This time, the bite block was an aid. When the patient closed into the soft wax of the bite block, the true centric was readily obtainable and as expected, there was a slight overjet in the incisal region. When the upper impression was taken in plaster, and a model,

Fig. 1—Case before treatment. Bite closed; jacket crowns discolored; posterior teeth eroded from clasps.

Fig. 2—Original models, right side, mounted by means of face-bow registration. Condylar inclinations adjusted by means of protrusive registrations.

Fig. 3—Original models, left side, mounted by means of face-bow registration. Condylar inclinations adjusted by means of protrusive registrations.

Fig. 4—Lower case completed, ready for insertion in mouth. Clasp parallel with internal attachment. Cast crown on molar jacket crown with distal attachment on left cuspid.

Fig. 5—Lower bridge conforms to symmetrical occlusal arc.

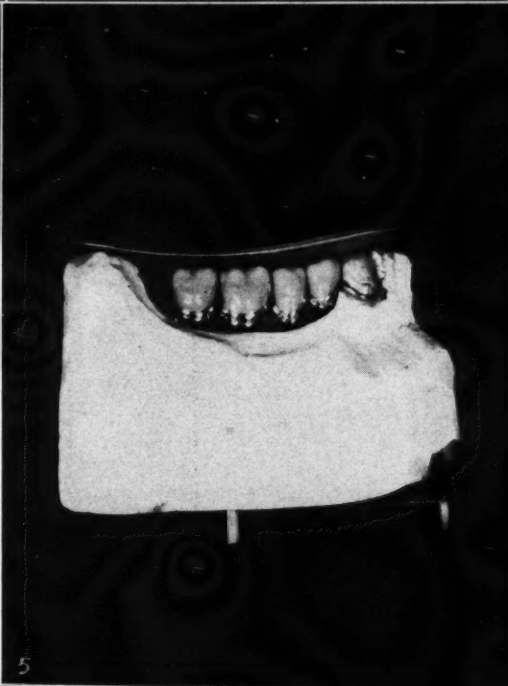
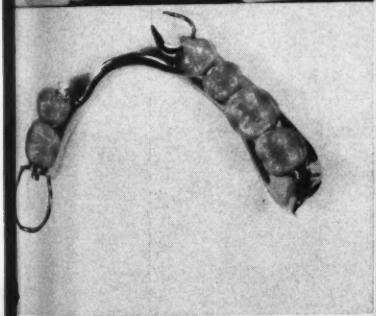
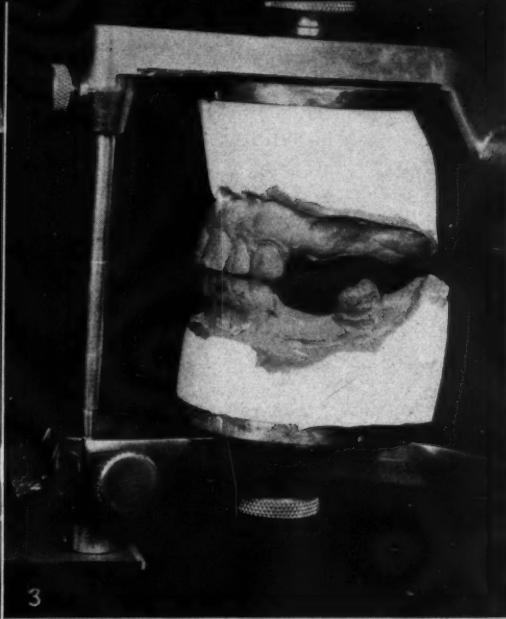
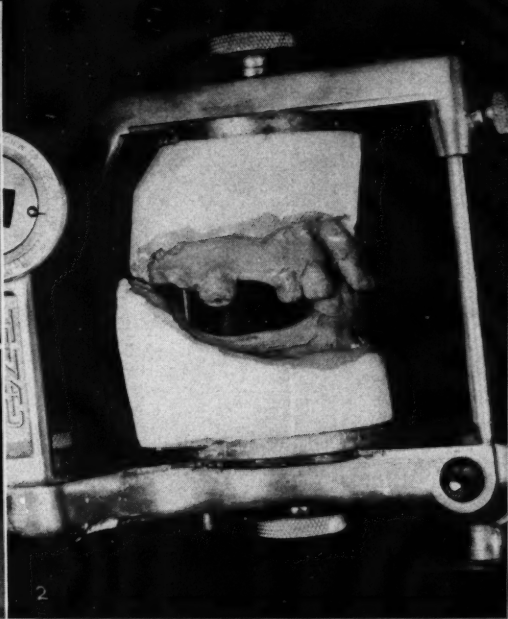
Fig. 6—Mandibular teeth completed and assembled in mouth. Porcelain thimbles placed on upper right first bicuspid and second molar and upper left cuspid by means of which bite was opened about 3 mm. directly in mouth. This was done by spot-grinding with carbon paper.

Fig. 7—Three upper teeth waxed for castings: namely, upper right first bicuspid and second molar and upper left cuspid. These castings will support three internal attachments. The upper left cuspid will have a jacket crown, whereas the upper right first bicuspid and second molar will have porcelain buccal facings baked and cemented in place.

Fig. 8—Castings have been placed in mouth and ground into position. A new bite block is made to check the bite again for mounting upper model to already completed lower model.

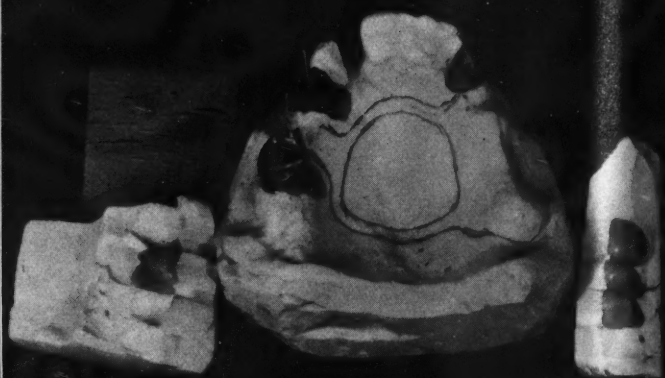
Fig. 9—Paralleling the three internal attachments. They are then invested and soldered into position.



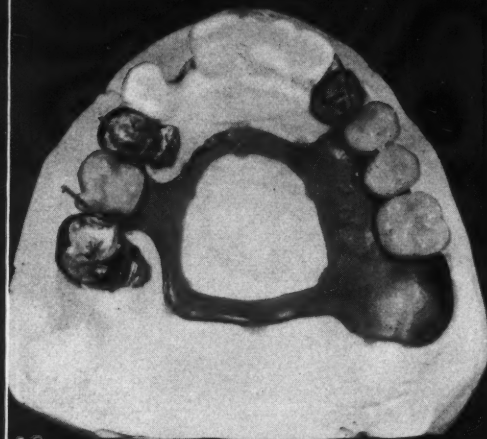
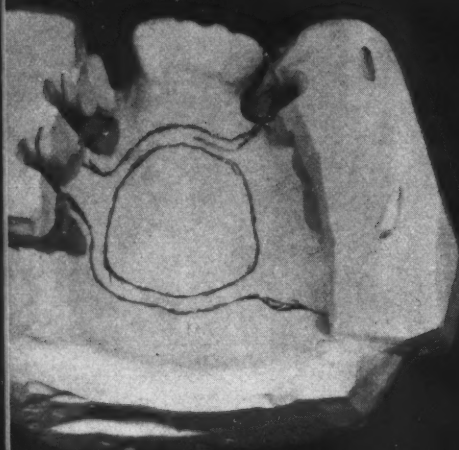




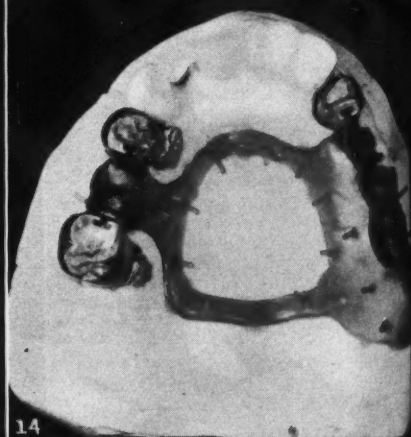
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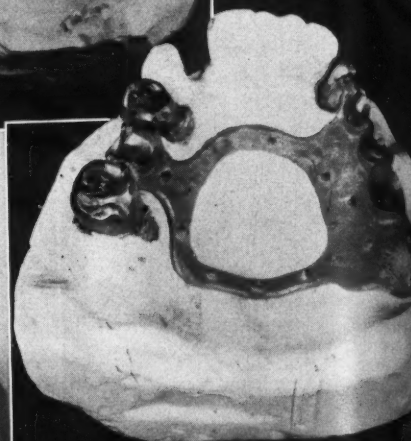
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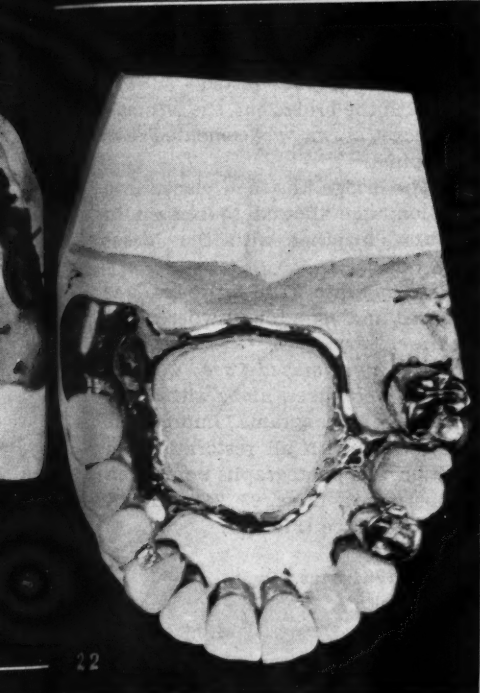


Fig. 10—Teeth are ground in and buccal surfaces waxed.

Fig. 11—Plaster indexes are now made for both sides, so that teeth do not change position while grinding ridge position, to allow for thickness of gold. Case is now outlined.

Fig. 12—Plaster indexes are placed in position. Male attachments may be seen in female boxes with low-fusing wires attached to them. Case is now ready for waxing.

Fig. 13—Waxing completed. Teeth are removed and wax spurs placed in position.

Fig. 14—Wax spurs in position. Teeth have been removed. Male attachments have been removed. Case is now ready for first investment.

(Legends continued on next page)



Fig. 15—Castings have been removed from abutment teeth. First investment now covers waxing. Case is now ready to be removed from model for second investment.

Fig. 16—Investment has been removed from model. Under-surface of wax may be seen. Spruing is done from under-surface and second investment is then added. Casting is done after this.

Fig. 17—After casting is finished and placed on model, male attachments are fitted, waxed in position, and soldered to the casting. Here they may be seen invested prior to being soldered to casting.

Fig. 18—Rough casting with male attachments soldered, placed in position on the working model. Sprues may still be seen on body of metal.

Fig. 19—Upper case is now completed. Metal and teeth are polished.

Fig. 20—Upper removable restoration is now tried in mouth and checked for occlusion. When this is satisfactory, the anterior maxillary teeth are prepared for jacket crowns.

Fig. 21—Porcelain thimbles are prepared for vital tooth preparations. Here they may be seen in position on their respective teeth. A master upper impression is now taken and a new bite wax. When poured, this model is mounted to lower model and jackets crown are made.

Fig. 22—A palatal view of entire upper reconstruction in position. Missing upper right lateral was restored by a porcelain bridge running from the cuspid jacket to the central jacket. Case is assembled in mouth in one appointment.

Fig. 23—Front view of finished case in mouth. Compare this with Fig. 1 to see difference in overbite.

Fig. 24—Left side view of finished case.

Fig. 25—Right side view of finished case.

Fig. 26—Full face view of completed case.

with the three castings in position on the right first bicuspid, right second molar, and the left cuspid, was poured, it was articulated to the lower model by means of the bite block and a small piece of yellow wax which was squeezed between the anterior upper and lower teeth, to record the over-

jet directly in the mouth. The bite was opened from 2.5 mm. to 3 mm. This was necessary to reduce the pronounced overbite (Fig. 1), and at the same time, to provide a little additional room for the internal attachments.

**Jacket Crown Preparations**—While the upper bridge was being constructed (Figs. 9 through 19), the preparation of the upper anterior teeth for jacket crowns was begun. When the construction of the upper palatal bar internal attachment bridge was completed, it was placed in position in the mouth and the preparations for the anterior jacket crowns were finished (Fig. 20).

An all-porcelain bridge, of a cantilever type, was constructed to supply the missing right lateral. A porcelain jacket crown on the right cuspid acted as the abutment to which was baked a lateral pontic. From this pontic, a metal lug extended, acting as a rest on the lingual surface of the right central.

After the anterior teeth were prepared for jacket crowns, thimble impressions of the preparations were taken and porcelain copings made. These were placed over the vital preparations (Fig. 21). I like to use these copings when taking plaster impressions, as they serve as accurate seats for the dies. The jacket crowns were prepared upon new models, which were made for them, and an all porcelain bridge was made, running from the right cuspid jacket crown with a porcelain lateral incisor fused to it, and a platinum lug resting on the distal of the right central jacket crown.

**Mouth Cleaned to Receive Restorations**—When the upper restorations were ready to be inserted into the mouth (Fig. 22), the abutment teeth were carefully cleaned with warm water and alcohol, and liberal coatings of copalite were applied to all the preparations.

**Order of Cementing**—1. The porcelain inlays in the buccal of the right molar cast crown and the buccal of the right first bicuspid cast crown were cemented in first.

2. The left cuspid thimble and the right molar cast crown were cemented into position, after first making certain of the parallelism by trying the upper removable bridge.

3. The bridge was then tried again, with the right bicuspid cast crown in position, to test the parallelism, and then removed. The bicuspid cast crown was then cemented and again, the parallelism was tested.

4. With the bridge out, the left cuspid jacket crown was cemented over its coping.

5. The bridge was then placed into position and allowed to remain in position, together with the jacket crown bridge.

**Checking Bite**—The entire bite was checked and spotground wherever it was necessary.

**Recording Finished Case**—Condyle pictures were taken, along with a new set of roentgenograms. Impressions were taken with all restorations in position, and photographs were taken of the mouth (Figs. 23, 24, and 25), and of the face (Fig. 26).

730 Fifth Avenue.

# The Editor's Page

A recent letter from a reader in Toronto is provocative. If the emphasis is to shift from therapy to prevention and if we consider dental disease as an expression of general metabolic disturbances rather than of local causes, this Canadian correspondent wonders whether maybe we should all go back to college. His letter and my reply are given herewith:

Your editorials in THE DENTAL DIGEST about DENTAL MEDICINE by Broderick made me wonder what it was all about, so I got the book and made extensive notes . . . I also got ENDOCRINOLOGY, CLINICAL APPLICATION AND TREATMENT by Werner, where on pages 480 and 481 you will find more about dehydration. As dentists, we advise this and that food, drugs, etc., and where do we get if the body does not utilize them? If these men are right, then we have to revise a lot of our usual advice, for heaven knows, what we have been advising is all too often a failure. How can we get the profession to do anything, though, when most of them are not even interested in dental magazines, let alone reading or studying a book; when we are only paid for some elaborate appliance, rather than advice which would be priceless because the appliance would then not be required, and the condition would be attended at the source.

Can we all go back to college?

Have you time to write me?

My answer was as follows:

Thank you for your interesting letter of September seventh.

The more I observe the ramifications of dental disease, the more I am convinced of its complexity. I think we have made the wrong emphasis in our treatment. We have at least implied that there is a certain finality about an inlay or a denture. My opinion is that we should try to learn all we can about biomechanics but more important still, we must broaden our philosophical base.

Yesterday, I observed, in my own practice, something which I have seen many times before and which I cannot explain: I have the impression that during the crises of the generative tract in women, dental caries is likely to be rampant—at puberty, during pregnancy, and during the menopause, we frequently see extension of rampant dental caries. *I believe*, although I cannot prove, that those women who gain excessive weight at

these times seem particularly susceptible to dental caries. This, of course, suggests some endocrine derangement, probably some hypofunctioning of the thyroid.

The deduction that I make, then, is that dental caries is associated in part with the disturbances in the endocrine system, of the colloidal state, as Broderick calls it, of the blood chemistry, of the mineral metabolism. The encouraging thing to me is that many intelligent patients are ready to accept this complex explanation, and I always tell them frankly that I know very little about the ultimate nature of the disease; they do not then expect the impossible from us in the way of treatment.

I do not think that vitamin D and calcium and X dentifrice and Y toothbrush—any one of these, is the answer. I think that each person expresses his dental caries individually and we have to make individual evaluations of our patients. We cannot prescribe for them by stock methods.

I was extremely glad to receive your letter, and I am sorry that I cannot tell you positively what we should do in approaching this problem. Like you, I am groping, and I am more impressed with the impenetrable darkness every day.

Dental caries, like every other pathologic state expresses itself differently in every person. There are no two cases of dental caries precisely alike any more than there are two cases of pneumonia alike. Each person reacts differently to his disease. Each person reacts to treatment differently. Prognosis is dependent on the skill of the dentist, to be sure, but it is also dependent on physical tides within the person and partly contingent on mental states.

Dental caries is a disease that expresses itself locally but the origins are ramifying and systemic. The causes of dental disease can probably never be measured alone with bacterial indexes, calcium-phosphorus ratios or by other laboratory tests. Back of these physical and chemical tides are mental forces which we do not fully understand. Perhaps the excitants for endocrine dysfunctions, in turn, prepare the ground for the disease that we conveniently label "dental caries."

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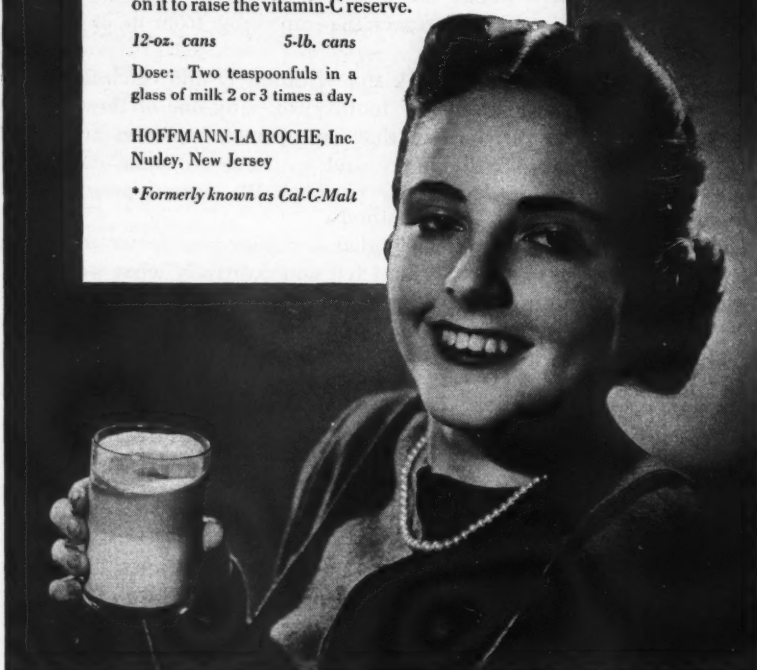
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Of The Dental Digest, published monthly at Pittsburgh, Pa., for October 1, 1938.  
State of Pennsylvania,  
County of Allegheny,

ss.  
Before me, a Notary Public in and for the State and county aforesaid, personally appeared M. B. Massol, who, having been duly sworn according to law, deposes and says that he is the Publisher of The Dental Digest, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 411, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the names and addresses of the publisher, editor, publication manager, and business managers are: Editor, E. J. Ryan, B.S., D.D.S., 708 Church Street, Evanston, Ill.; Publisher, M. B. Massol, 1005 Liberty Ave., Pittsburgh, Pa.; Publication Manager, E. C. Ketterer, 1005 Liberty Ave., Pittsburgh, Pa.

2. That the owners are: Dental Digest, Inc., 1005 Liberty Ave., Pittsburgh, Pa.; Oral Hygiene, Inc., 1005 Liberty Ave., Pittsburgh, Pa.; M. B. Massol, 1005 Liberty Ave., Pittsburgh, Pa.; Louise

A. Smith, Schenley Hotel, Pittsburgh, Pa.; Lynn A. Smith, 1005 Liberty Ave., Pittsburgh, Pa.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stocks, bonds, or other securities than as so stated by him.

(Signed) M. B. MASSOL,  
Publisher.

Sworn to and subscribed before me this 12th day of September, 1938.

(Seal) E. G. Burgdorf, Notary Public.  
(My commission expires May 11, 1940.)

### NOTES ON THE

## Cuff

September 1: What do our friends across the sea think of us American dentists? We are quick to concede to ourselves the title of the best dentists in the world, a claim that is not readily accepted by some of our foreign colleagues. Recently, a dentist of Great Britain wrote for *The Dental Gazette* his impressions of dental practice in the United States. Doctor J. W. Smith says, "Three things should be remembered at the outset. First, however professional he may be, the American dentist is also essentially a business man; secondly, the general public in America has been educated to a much greater consciousness of the importance of dental treatment than exists in this country, and is prepared to pay for treatment in a way that very few people over here are willing to consider; and, thirdly, there is hardly any provision in America for the treatment of really poor people, and no scheme for the industrial population comparable with our own National Health Insurance Scheme. . . .

"Orthodontia in America has developed enormously, and almost all children have orthodontic treatment at some time or other. . . .

"I feel that the whole trend of American education tends to the assimilation of facts, rather than to the development of intelligence. The child is taught facts but is discouraged from questioning them, and a speculative outlook (to which we may sometimes be inclined to give undue prominence in this country) is sternly discouraged. In dental schools, etc., the training is far more standardized than it is in this country. All the students turned out by a particular hospital will be taught one way of taking an impression, one technique for making dentures, one rule with regard to conservative restoration. The American student is not taught to use his own intelligence to nearly the same extent the English student. . . .

"Having said this, however, I must  
(Continued on page 440)



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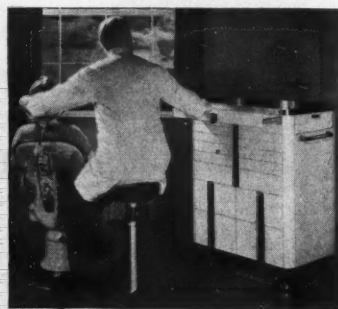
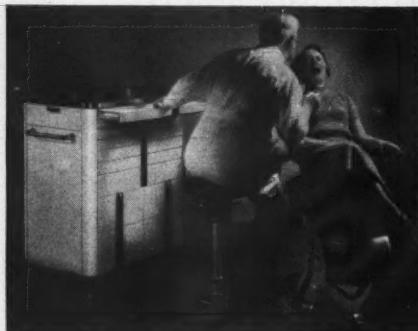
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(Please use coupon on page 454)

# ANNOUNCING . . .

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Another office view . . . showing the No. 146 Portable Cabinet in another operating position.

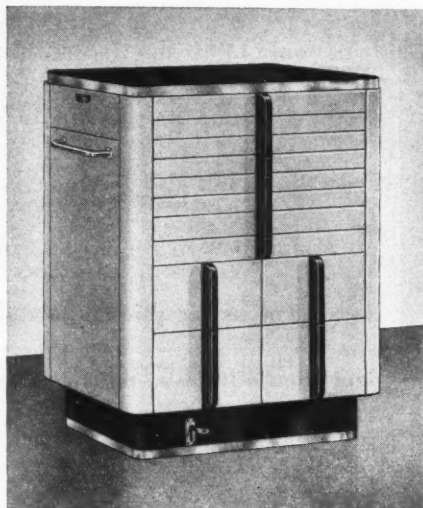
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in fairness say that the average American dentist is enormously interested in his profession, and his technical skill is very high indeed. One evidence of the reality of this interest is the universal popularity of the postgraduate courses, which vary in length usually from three weeks to three months or one year, and the startling fact is that these courses are always full. . . .

"Then, again, another thing that would strike any student of public health in America, is the virtual absence of State-aided medical and dental treatment, and the lack of easily available facilities for treatment for persons who are unable themselves to pay normal fees.

"There is not in America anything comparable to the British Voluntary Hospital. The only free hospitals are more akin to the old type of Poor Law Hospitals, and so far as my experience went, would show up very poorly by comparison with British Voluntary Hospitals. There are some school clinics run by Public Health Departments and Education Authorities, but there is no national or federal system for school dental treatment."

**September 6:** Bert Hooper of Lincoln, Nebraska, a frequent contributor to this magazine, has taken his immediate denture story to Stockholm, with color movies and sound effects. A card from him from Lucerne, Switzerland, describes his trip.

**September 9:** A funereal card, slyly circulating about the country has come to my attention. Between the black borders of this mourning card, in doleful type, is this threat: "Give me an order or I will vote for him again." It takes no prescience to know who "him" is. "He" has been maligned; he has been the subject of scandalous jokes and vicious innuendoes; his sanity has been questioned; his family has been abused by malicious whisperings. A few commentators have been courageous enough to express their dislike of Mr. Roosevelt's policies under their own names; others have been courageous enough in the Congress and in other bodies to speak out against his policies. Such free and forthright expressions against a President are the healthful signs in a democracy. It is unlikely that Mr. Roosevelt resents these direct frontal attacks. But scurrilous and insidious undermining, hidden behind anonymity, on any subject is cowardly

(Continued on page 441)

and reprehensible. Even in the smaller sphere of magazine editing, our readers will have noticed the disdain with which anonymous criticism or comment is viewed. At the back of the book in our "Suggestions to Contributors" we indicate very plainly that "Anonymous communications will not be read."

It is probably in the American tradition to take advantage of the privilege of cracking jokes outright even at the man who holds the highest office in the land. The wisecracks about Andrew Jackson are well known. But it is probably a stronger American tradition to demand fair play and sportsmanship. And the distribution of such anonymous subterfuge is not sportsman-like.

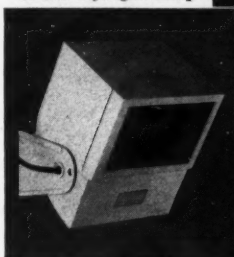
Freedom of speech and of the press is something that we all cherish, but it is not a freedom to be abused. We would dislike censorship and the gag rule from any governmental agency. To protect the freedom we now enjoy, it might be well if we each began individually to impose methods of discipline and self-restrictions when we have an attack to make; we might well strive to be as bold and direct and fearless as we wish, but to be so openly, and within the bounds of respectfulness. This striving to couple courage with good manners might be applied to dental politics as well as to the larger arena of American politics.

**September 12:** One of the masterful physicians of America has recently expressed his philosophy of present-day diagnosis. James B. Herrick of the medical staff of the Presbyterian Hospital of Chicago, writing in the *Journal of the American Medical Association* of September tenth, paints the portrait of the feeble, futile fellow in medical practice:

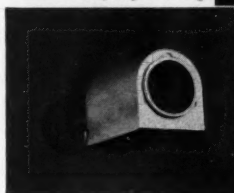
"A prolific cause of errors in diagnosis is ignorance, varying in degree, of course, on the part of the practitioner. He may be lacking in information because he has no urge to study, has never been taught to study, or perhaps lacks the ability to study. He made a mistake in his choice of a profession; the medical school erred in encouraging him or even permitting him to be a physician. He fails to keep abreast of the times by reading and by conferences with his colleagues. He loses touch with the laboratory and the morgue. He is either a forceless,

(Continued on page 442)

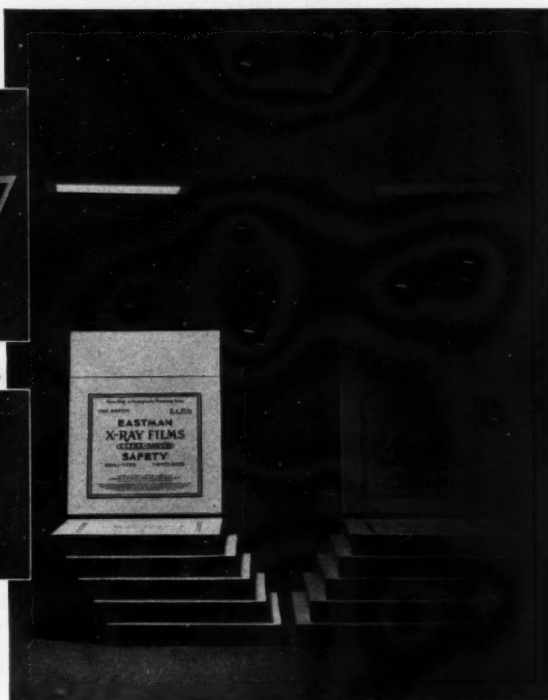
Kodak Safelight Lamp



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RIGHT—Relative brightness of light from Series 6B (left) and 6A (right) Wratten Safelights. The lamps are Eastman Safelight Lamps.



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inefficient man who, feeling his inferiority, attempts but little and does that poorly, or he may be one who, possessing only the little knowledge that is a dangerous thing, becomes a menace because he is blissfully unaware of the meagerness of his knowledge. Where better informed and wiser men would fear to tread, he rushes in with scapel or harmful drug or half-baked theory, before he knows the real nature of the ailment he has been called to treat. . . .

"The further away the doctor is from the laboratory, the instrument, the consultant and, most important of all, from the patient, the greater is the likelihood of error. . . .

"He (the family doctor) agrees with Mackenzie that, when one wishes a flat tire fixed, one resents the advice of the garage man that a thorough overhauling of the car is necessary. . . . The same tendency to advise unnecessary examination is seen in the office work of general practitioners and specialists and in the group or clinic. Examination by x-rays, the electrocardiograph or by the Wassermann or metabolism test would rarely add usable knowledge in the case of a patient with a rheumatic mitral stenosis and a moderate degree of congestive heart failure. On the other hand, a patient with a leaky aortic valve and threatening heart failure may present an entirely different problem. The cause of the lesion—rheumatism, syphilis, arteriosclerosis, hypertension — the possibility of aneurysm or even of an error in diagnosis with a congenital defect or a coarctation of the aorta causing the symptoms may make one or several of these tests imperative. Proper therapy may depend on their results. . . .

"As G. K. Chesterton said, 'The object of opening the mind as of opening the mouth is to shut it again on something solid.'

"'Doctor,' said a patient to me, 'I hope you will examine the x-ray films less and me more.' There is a good text for a sermon: in examining the films do not overlook the patient.

"There is one feature concerning which I wish to speak a little more at length. To state it paradoxically, some physicians know too much to be good diagnosticians or safe advisers. They have more knowledge than they can well handle; they are 'suffocated beneath a dead weight of erudition.'

(Continued on page 446)

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#### THE DENTAL DIGEST

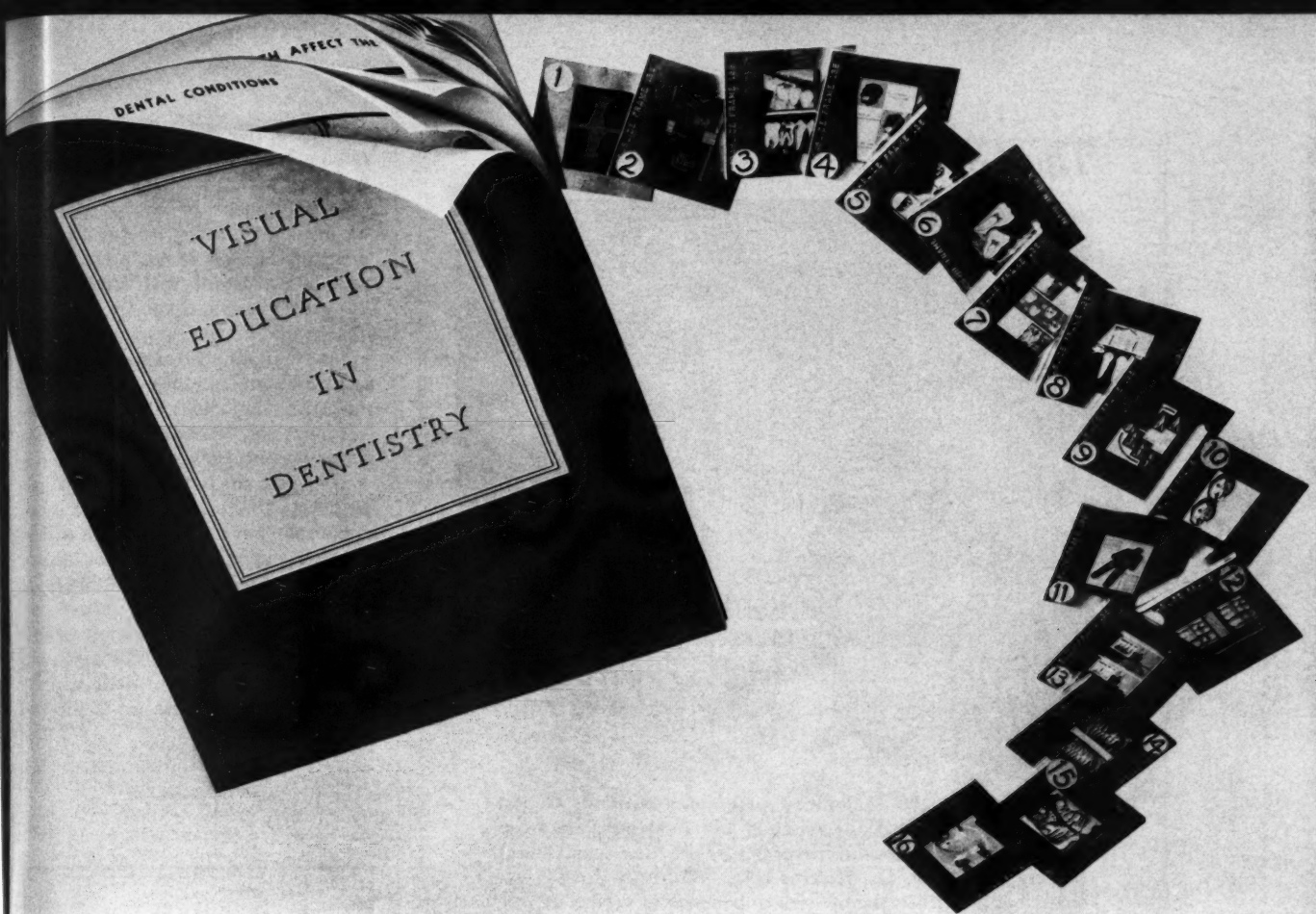
1005 Liberty Ave.

Pittsburgh, Pa.

A doctor of this type knows a multitude of facts. But these facts and their arrangement in the doctor's mind resemble the motley collection seen on the medicine shelves of the bathroom. To be of value, facts, whether they are the result of planned research or of accumulated experience, must be seen not in their isolation but in their relation to other facts. President Neilson of Smith College expressed it the other day when he said that 'truth lies not in facts but in the relations between facts.' The physician or surgeon may lack the ability to distinguish between major and minor symptoms of disease. He fails to realize that there are what might be called the nonessentials of diagnosis. One of these nonessentials held too close to the eye may obscure the central field of vision and the essentials may not be seen. He may be so over-conscientious as to be timid, so obsessed by the laudable desire to be thorough that he putters over minutiae and overlooks the obvious. Valuable time may be lost in waiting for the blood count, the icteric index, the electrocardiogram, the x-ray film, and the golden—perhaps the arsenical—opportunity for prompt action slips by, the favorable time for operation, for giving antitoxin, or prescribing bed rest is lost."

*September 21:* Last month in this department we made faces at Mr. Bernarr Macfadden and his *Physical Culture* magazine because of the story that appeared in his August issue on THE DENTAL FEE RACKET. Now the trilogy by Doctor X is complete with the publication of the September and October dental installments. In September the mysterious Doctor X discussed FAKES AND FACTS ABOUT "PAINLESS DENTISTRY" and in October, WHAT DENTISTS DON'T KNOW ABOUT TEETH. The latter two installments are not so absurd and weird as the article that appeared in the August issue. One is impressed immediately upon reading the last two articles that they have been prepared after consultation with a dentist who is unusually familiar with current research and dental practice. It is surprising to see that this dentist who hides behind the veil is familiar with the recent work of Broderick on dental medicine and with that of Schour and Bodecker on dental histology. Whoever the dentist is who has helped in the preparation of this material has been assiduous in his search of the dental literature. (Concluded on page 448)





## NOW AVAILABLE—*Slides of Visual Education Charts*

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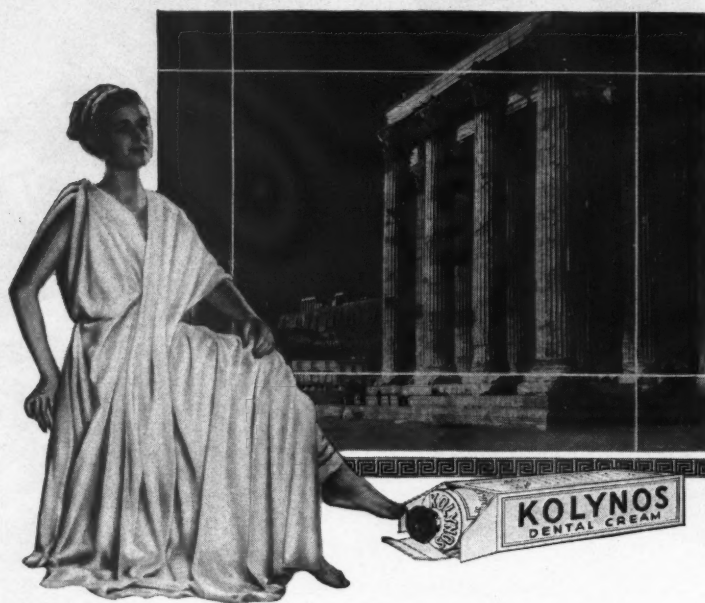
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| 5. "One Rotten Apple Can Spoil a Bushel"  | 13. "Things Are Not Always What They Seem . . ." |
| 6. The Danger from the Impacted Tooth     | 14. Why Construct a Bridge?                      |
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Many of our colleagues in the profession will probably disagree, but I would say that the September and October issues are not particularly harmful to dentistry. Doctor X's statement of the case of "painless dentistry" is consistent with present-day knowledge and his exposure of dental quacks and advertisers will merit the applause of all ethical dentists. What is said about our lack of knowledge on dental subjects is also true. We do not know what causes the common types of dental disease. Whether it is well to go to the public with such confessions of ignorance or not may be debatable, but I prefer to cast my lot with the exponents of candor, and in speaking at the chair or before groups of the public, I think it proper that we make a clear confession of our limitations concerning the causes of dental disease. As Montaigne so aptly said, "Only the charlatan is sure."—  
E. J. R.

## DENTAL MEETING

### Dates

American Dental Association, eightieth annual meeting, St. Louis, Missouri, October 24-28.

American Academy of Periodontology, silver anniversary meeting, Coronado Hotel, St. Louis, October 20-22.

American Academy of Restorative Dentistry, St. Louis, October 22-23.

American Society for the Promotion of Dentistry for Children, Jefferson Hotel, St. Louis, October 24.

Pan American Odontological Association, second annual meeting, Hotel Statler, St. Louis, October 24.

American Dental Assistants Association, fourteenth annual meeting, DeSoto Hotel, St. Louis, October 24-28.

Association of American Women Dentists, seventeenth annual meeting, St. Louis, October 24-28.

American Society for the Advancement of General Anesthesia in Dentistry, Belmont Plaza Hotel, New York City, Monday evening, October 24.